ABSTRACT OF THE DISCLOSURE

Methods for utilizing optical systems in order to introduce digitally tunable amounts of temporal dispersion into optical signals and methods and systems for providing angular dispersion compensated output from optical switching/routing systems. The method for introducing controlled amounts of temporal dispersion into a signal includes the steps of (a) selectively directing an electromagnetic radiation beam to a predetermined optical path, and (b) subsequently selectively directing the electromagnetic radiation beam to another predetermined optical path. The angular dispersion compensated optical system includes a switching/routing optical system and a beam deflection element optically disposed on an output side of the switching/routing optical system. During operation of the angular dispersion compensated optical system, the beam deflection element selectively deflects an output electromagnetic radiation beam originating from the switching/routing optical system in order to render, after selective deflection, a direction of propagation of the electromagnetic radiation output beam parallel to the direction of propagation of an input beam of the switching/routing optical system.